

sample, and wherein the extraction means either samples a head space near the sample or samples the sample directly.

Cancel Claims 2 to 4.

Amend Claims 5, 7, 8, and 9 as follows.

5. (amended) An apparatus according to Claim [3] 1, additionally comprising means for shielding the [cylindrical support] fibers from the atmosphere.

7. (twice amended) An apparatus according to Claim [4] 1, wherein the coating is an organic material selected from the group consisting of polyethyleneglycol and methoxy polyethyleneglycol, silicone, polyimide, divinylbenzene, polyacrylate, carbon-based sorbents and ion-exchange materials.

8. (amended) An apparatus according to Claim [4] 1, wherein the [solid support is] fibers are of a material selected from the group consisting of fused silica, graphite, solid polymers and metals .

9. (amended) An apparatus according to Claim [4] 1, wherein the [fibre is] fibres are of fused silica, and the coating is of silicone.

Add new Claims 20 to 23.

20. An apparatus according to Claim 1, wherein the fibers are solid fibers or hollow fibers .

21. An apparatus according to Claim 20, wherein the coatings are selected from absorption- and adsorption-type coatings

22. An apparatus according to Claim 20, wherein the coatings are identical or different.

23. An apparatus according to Claim 20, wherein the fibers are hollow fibers, coated on the outside or the inside.

Amend Claim 10 as follows.

10. (twice amended) A method for solid phase micro extraction of analytes included in a fluid or a solid sample, comprising

(a) exposing a fluid or a solid sample including target analytes in a gas-tight enclosure, to a solid support in the form of multiple fibers which may be coated or uncoated, the [support] fibers and/or the coating being selected based upon selectivity of the [support] fibers and/or coating for at least one of the analytes in the sample, for a sufficient time to permit chemical extraction of the analytes by the [support] fibers to occur, wherein the multiple fibers either samples a head space near the sample or samples the sample directly, and

(b) ending said [contact] exposure and then placing said solid support into a micro volume of solvent where chemical desorption of the analytes from the support occurs.

Cancel Claims 11 and 12.

Amend Claims 13, 14, 16 and 17 as follows.

13. (amended) A method according to Claim [12] 10, wherein the solvent is a suitable organic solvent.

14. (amended) A method according to Claim 10, wherein the chemical extraction is by absorption or adsorption of the target analyte by the [solid support ] fibers or coating.

16. (amended) A method according to Claim 10 wherein the [support is] fibers are uncoated.

17. (amended) A method according to Claim 16, wherein the [support is] fibers are of fused silica.

Enter new Claims 24 and 25 as follows.

24. A method according to Claim 10, including the additional step of

(c) storing and archiving the microvolume of solvent containing the dissolved analytes until a convenient time for analysis.

25. A method according to Claim 10, wherein step (b) the solvent containing the extracted analytes are shielded from volatilizing into the atmosphere.

#### REMARKS

By this amendment, Claims 2 to 4, 11 and 12 have been cancelled, and new claims 20 to 25 added to further define our invention. It is noted that the number of claims in the application is still below twenty. Accordingly, no excess claims fees are believed to be applicable.

The independent apparatus claim 1 has been amended to include the content of original claims 2 and 4 and to further restrict the extraction means to a solid support in the form of multiple fibers. The Examiner seems to recognize in section 10. of the Final Action., that the use of "multiple fibers", for example, for simultaneous multiple extractions, is neither taught nor suggested in

Pawliszyn.

Similar amendments have been made to Claim 10, so that claim 10 is essentially of the same scope as claim 1.

Support for the "multiple fibers" amendment is found in our Specification, for example, at page 5, line 26, and at page 6, line 16.

Support for new Claims 20 to 25 is found in our Specification for example, for claim 20 at page 5, lines 13-14; for claim 21 at page 5, line 31 to page 6, line 2; for claim 22 at page 6, line 17; for claim 23 at page 5, lines 13-14; claim 24 at page 7, line 28; and for claim 25 at page 5, line 9.

Accordingly, the Examiner will readily appreciate that this amendment overcomes the 103(a) issue respecting Murphy alone, as set out in paragraph 4. of the Final action.

The second, and only other issue, is that Claims 1-5 and 7-19 stand rejected under 35 U.S.C. 103(a), as unpatentable over Pawliszyn in view of Murphy.

The Examiner has admitted that Pawliszyn "fails to teach chemical desorption or desorption into a microvolume" of solvent.

The Examiner also seems to recognize in section 10. of the Final Action., that the use of "multiple fibers", is neither taught nor suggested in Pawliszyn. By this amendment, Claims 1 and 10 have now been restricted thereto. -

Accordingly, Pawliszyn is further deficient from our claimed invention.

Looking at these deficiencies, Applicants continue to assert that Murphy does not bridge the gap acknowledged by the Examiner.

Specifically regarding the further deficiency now recited in amended Claims 1 and 10, as the Examiner appreciates in the Final Action in section 3., fourth paragraph, that a fiber (or multiple fibers) is(are) not used to extract the target analytes from the sample.

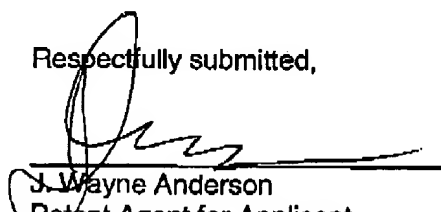
Accordingly, Murphy's apparatus operates in quite a different and indeed a non-analogous manner to either Pawliszyn or our invention.

The Examiner also recognizes that Murphy is further deficient in that in section 6., of the Final Action she states that Murphy "failed to explicitly teach that the sample vial is sealed or that a microvolume is used". This is a further indication that Murphy is in fact non-analogous prior art.

Regarding the "means for shielding the [support] fibers from the atmosphere" as recited in amended Claim 5, for the reasons of record in the Response to Final, we continue to emphasize that no equivalent means is described in Murphy. A new method-type claim 25 of corresponding scope has been added to specifically cover this feature of the invention.

Respectfully submitted,

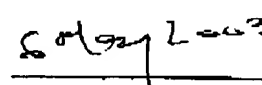
ech

  
J. Wayne Anderson  
Patent Agent for Applicant  
Regn No: 28,158  
National Research Council Canada  
Tel: (613) 993-3899

#### CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

  
J. Wayne Anderson

  
May 6, 2003